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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/759,054	01/10/2001	Gabor Kalman	050-99-050	1934

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EXAMINER

LAXTON, GARY L

ART UNIT PAPER NUMBER

2838

DATE MAILED: 09/03/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/759,054

Applicant(s)

KALMAN ET AL.

Examiner

Gary L. Laxton

Art Unit

2838

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 June 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1-21 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 1, 13 and 21:

The claims all recite an apparatus with two inverters. The claims appear to be misdescriptive since there is a DC link within the circuit that requires AC to DC conversion. As commonly known in the art, the process of converting AC to DC is accomplished by a converter. Inverters, are known in the art to invert DC into AC. Therefore, it is unclear and misleading for the applicant to use an inverter for the process of converting to DC.

Claims 2-12 and 14-20 inherit the same deficiencies of the independent claims through dependency.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1, 9 and 21 are rejected under 35 U.S.C. 102(b) as being anticipated by Chausse et al.

Chausse et al disclose an apparatus (figure 1) comprising:

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an ac motor (10);
a first converter (12) having an input adapted to receive ac power (3Ø PWR IN);
a second converter (14) (configured as an inverter) coupled to the ac motor (10);
means (22) for operating the first converter (12) in current mode; (Col. 4 line 42)
means (24) for operating the second converter (operating as an inverter) in commutation mode.
(See at least the Abstract lines 1 and 2).
Furthermore, there is shown dc link circuit (16).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 2-5, 10-14, 18, 19 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chausse et al in combination with Kalman et al.

Chausse et al disclose an apparatus (figure 1) comprising:
an ac motor (10);
a first converter (12) having an input adapted to receive ac power (3Ø PWR IN);
a second converter (14) (configured as an inverter) coupled to the ac motor (10);
means (22) for operating the first converter (12) in current mode; (Col. 4 line 42)
means (24) for operating the second converter (operating as an inverter) in commutation mode.
(See at least the Abstract lines 1 and 2).
Furthermore, there is shown dc link circuit (16).

However, Chausse et al do not disclose using park or space vector control

Kalman et al teach that it is well known in the art to utilize park vector or space vector control for power factor control and duty cycle control of pulse width modulated inverters that control magnet motors. (Abstract; Cols. 1 and 2; Col. 4 lines 15-60).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize park vector or space vector control of inverters in order to better control the power factor of permanent magnet motors as taught by Kalman et al.

7. Claims 6-8 and 15-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chausse et al in combination with Kalman et al and further in combination with Ma et al.

Chausse et al in combination with Kalman et al discloses the claimed invention as stated in regards to above except for a capacitor bank and damping.

Ma et al teach a CSI based drive circuit having active damping control. Furthermore, a capacitor bank is provided to connect selected phases of the capacitor bank to the dc line in order to reduce ripple.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to utilize a capacitor bank and damping control of Ma et al in order to reduce current ripple as taught by Ma et al.

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

US 4,565,957 Gary et al disclose a method and system for starting a motor commutated SCR inverter using current commutation;

US 5,801,517 Borle discloses a method and control circuit for a switching regulator using current mode control and having a DC link;

Response to Arguments

9. Applicant's arguments with respect to claims 1-21 have been considered but are moot in view of the new ground(s) of rejection.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gary L. Laxton whose telephone number is (703) 305-7039. The examiner can normally be reached on 5-4-9.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Nappi can be reached on (703) 308-3370. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9318 for regular communications and (703) 872-9319 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

Jeffrey Sterrett
Primary Examiner

